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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,319	03/23/2004	Yong-jin Ahn	1293.1278C5	1755
49455	7590	09/12/2005	EXAMINER	
STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			CHOW, LIXI	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/806,319

Applicant(s)

AHN ET AL.

Examiner

Lixi Chow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date see note 3.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

Continuation from note 3: 6/18/04, 3/1/05, 7/21/05, and 7/26/05.

### DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3 and 7-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Dekker (US 2002/0003762).

Referring to claim 1:

Dekker discloses a method of forming a first state and a second state alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level in an optical recording apparatus (see Figs. 1A-1C and Fig. 3; first state corresponds to the section labeled 13 in Fig. 1A or 1B; and second state corresponds to the section labeled 14 in Fig. 1A or 1B), the method comprising:

generating a recording waveform which includes a first multi-pulse having a plurality of first pulses corresponding to the first level of the input data (Fig. 1A or 1B, section labeled 13 having power level  $P_w$ , which corresponds to the first level) and a second multi-pulse having a plurality of second pulses corresponding to the second level of the input data (Fig. 1A or 1B, section labeled 14 having power level  $P_e$ , which corresponds to the second level).

Referring to claim 2:

Dekker discloses the method of claim 1, further comprising:

forming the first state on the optical recording medium according to the first pulses of the first multi-pulse; and forming the second state on the optical recording medium according to the second pulses of the second multi-pulse (see Fig. 1A or 1B and paragraph [0028]).

Referring to claim 3:

Dekker discloses the method of claim 1, further comprising:

forming a mark as the first state on the optical recording medium according to the first multi-pulse; and forming a space as the second state on the optical recording medium according to the second multi-pulse (see Fig. 1A or 1B and paragraph [0028]).

Referring to claim 7:

Dekker discloses the method of claim 1, further comprising:

generating information data representing a characteristic of one of the first multi-pulse and the second multi-pulse (see Fig. 3 and paragraph [0035]; the pattern generator 63 generate information representing the characteristic of sequences of write pulses and sequences of erase pulses).

Referring to claim 8:

Dekker discloses the method of claim 7, further comprising:

rotating the optical recording medium in response to the information data (since Dekker shows that optical recording medium is being placed on the motor 34, it is inherent the optical recording medium is rotated in response to the information data; that way information can be recorded onto the optical recording medium).

Referring to claim 9:

Dekker discloses the method of claim 7, further comprising:

rotating the optical recording medium at a speed corresponding to the information data (paragraph [0027] indicates the channel bit period of T1, T2 and T3, having different recording speed; then, the motor would inherently rotates at a speed that is defined by the information data).

Referring to claim 10:

Dekker discloses the method of claim 7, further comprising:

recording the information data on the optical recording medium (see paragraphs [0034]-[0035]).

Referring to claim 11:

Dekker discloses method of forming a first state and a second state alternatively and sequentially on an information storage medium in response to input data having a first level and a second level, respectively, in a recording apparatus (see Figs. 1A-1C and Fig. 3; first state corresponds to the section labeled 13 in Fig. 1A or 1B; and second state corresponds to the section labeled 14 in Fig. 1A or 1B), the method comprising:

generating a recording waveform which comprises a recording pattern corresponding to the first level of the input data (Fig. 1A or 1B, section labeled 13 having power level  $P_w$ , which corresponds to the first level), an erase pattern having a multi-pulse corresponding to the second level of the input data (Fig. 1A or 1B, section labeled 14 having power level  $P_e$ , which corresponds to the second level), and a cooling pulse concatenating the recording and erase patterns (see Fig. 1A or 1B, the off-pulse between the section labeled 13 and 14 is the cooling pulse).

3. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Seo (US Pub. No. 2002/0101808).

Referring to claim 1:

Seo discloses a method of forming a first state and a second state alternatively and sequentially on an optical recording medium in response to input data having a first level and a second level in an optical recording apparatus (see Figs, 6A-6B and paragraph [0019]), the method comprising:

generating a recording waveform which includes a first multi-pulse having a plurality of first pulses corresponding to the first level of the input data and a second multi-pulse having a plurality of second pulses corresponding to the second level of the input data (see Figs. 6A-6B and paragraphs [0052] and [0054], e.g., the first multi-pulse corresponds to AP\_type()=5, and the second multi-pulse corresponds to AP\_type()=4).

Referring to claim 4:

Seo discloses the method of claim 1, wherein the generating of the recording waveform comprises:

changing the first multi-pulse according to a characteristic of the second pulses of the second multi-pulse (see Fig. 6A, the first pulse of the AP\_type()=5 multi-pulse is changed depending on the previous pulse, which is the second pulse of the AP\_type()=4 multi-pulse).

Referring to claim 5:

Seo discloses the method of claim 4, wherein the second multi-pulse comprises a starting pulse and an ending pulse, and the changing of the first multi-pulse comprises:

changing a start pulse of the first multi-pulse according to a characteristic of one of the starting pulse and the ending pulse of the second multi-pulse (see Fig. 6A, the first

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pulse of the AP\_type()=5 multi-pulse is changed depending on the previous pulse, which is the ending pulse of the AP\_type()=4 mutli-pulse).

Referring to claim 6:

Seo discloses the method of claim 5, wherein the changing of the start pulse of the first multi-pulse comprises:

changing a voltage level of the starting pulse of the first multi-pulse (see Fig. 6A, the starting pulse of AP\_type()=5 multi-pulse is higher than the reference level).

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nishiuchi et al. is cited, because Nishiuchi et al. show an optical information recording method of recording mark or space consist of plurality of record pulses and plurality of erase pulses.

Ichihara et al. is cited, because Ichihara discloses a recording/reproducing apparatus capable of over-write information on a phase change optical discs, and controlling the power level of multi-pulse erase pattern.

Ohno et al. is cited, because Ohno et al. teach a modulator and a pattern setting circuit capable of recording multi-pulse record pulse and multi-pulse erase pulse.

Tanaka et al. is cited, because Tananka et al. show a recording compensating control unit for compensating the recording pulse depending on the presence or absence of a predetermined space or record mark.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lixi Chow whose telephone number is 571-272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LC 9/1/05

A handwritten signature in black ink, appearing to read 'William Klimowicz', written in a cursive style.

**WILLIAM KLIMOWICZ  
PRIMARY EXAMINER**